

se: Collecting particles on filter
: Nuclear power plants, under ground mines, in emergency situations etc. where fast responce and independent operations are needed. Purpose: Where:

Portable battery operated sampler from SENYA Oy



GENERAL SPECIFICATIONS FOR SENYA OY LILLIPUT SAMPLER

300 x 175 x 165mm (1 x h x w) **SIZE**

WEIGHT approx. 10kg **MATERIAL** Anodized aluminum

Ø110mm, Ø100mm, standard filters **FILTERS**

System STUK Ø77mm laminated filters

With adapter Ø47mm filters

With adapter activated carbon filters

Battery status indicator, 3-colour LED

Automatic switch OFF when battery power too low

Timer function NOT yet available

Sampler can be run from 230V/50Hz electrical net with Battery Charger

if Battery Pack is low:

HOWEVER BATTERY PACK MUST BE IN NORMAL POSITION IN NET RUNNING.

VOLUME FLOW

Battery duration (Ø90 active area) Ø110, Ø100mm glass fiber 12m3/h approx. 1,5h STUK Ø77mm 10m3/h 1,5h 9m3/h 2,5h 7m3/h 4h

CONTROLS

3-stage flow speed control

DISPLAY

Pressure difference Pascal Airflow m3/h Cumulative volume m3Cumulative time hh:mm:ss

MEASURING PRINCIPLE

Pressure difference over orifice, no moving parts

DATA STORAGE

Cumulative volume, One sampling Cumulative time, One sampling

POWER SUPPLY

24VDC, 2 x 12V/7Ah closed lead acid batteries in series

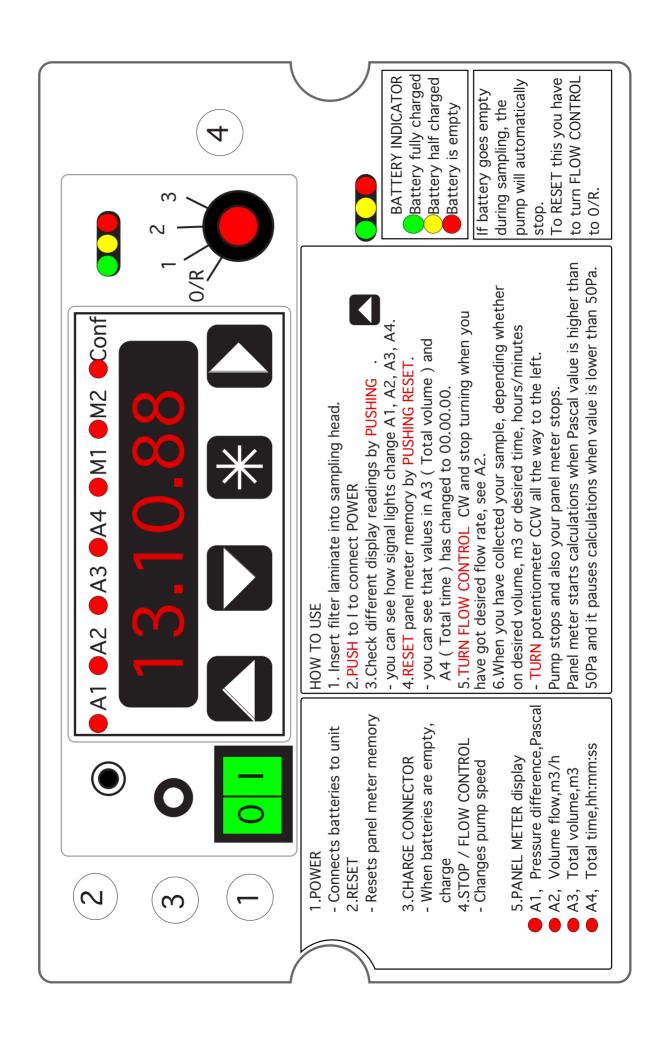
Max current used 4,5A

BATTERY CHARGER

24VDC, 5A, 3-step charger with 3-colour LED indicators

ACCESSORIES

Tripod Carrying belt Delivery case



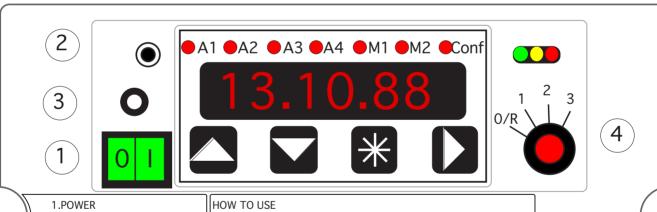
HOW-TO-USE LILLIPUT



Charge battery by connecting charger to 1. connector.

When 3-step charger light has turned to greeen then battery is full.
When not in use keep battery fully loaded.





- Connects batteries to unit
- 2.RESET
- Resets panel meter memory
- 3.CHARGE CONNECTOR
- When batteries are empty, charge
- 4.STOP / FLOW CONTROL
- Changes pump speed

5.PANEL METER display

- A1, Pressure difference, Pascal
- A2, Volume flow,m3/h
- A3, Total volume,m3
- A4, Total time,hh:mm:ss

- 1. Insert filter laminate into sampling head.
- 2.PUSH to I to connect POWER
- 3. Check different display readings by PUSHING
- you can see how signal lights change A1, A2, A3, A4.
- 4.RESET panel meter memory by PUSHING RESET.
- you can see that values in A3 (Total volume) and A4 (Total time) has changed to 00.00.00.
- 5.TURN FLOW CONTROL CW and stop turning when you have got desired flow rate, see A2.
- 6. When you have collected your sample, depending whether on desired volume, m3 or desired time, hours/minutes
- TURN potentiometer CCW all the way to the left.

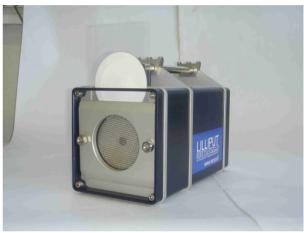
Pump stops and also your panel meter stops.

Panel meter starts calculations when Pascal value is higher than 50Pa and it pauses calculations when value is lower than 50Pa.

- BATTERY INDICATOR Battery fully charged Battery half charged Battery is empty
- If battery goes empty during sampling, the pump will automatically stop.

To RESET this you have to turn FLOW CONTROL to 0/R.





2. Open filter cover
Insert filter into sampling head.
you can use Ø100mm round filters
or you can use filter laminates.
Close filter cover.

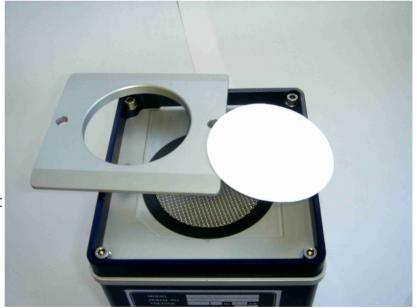


You can:

Use LILLIPUT laminated filters:

- max diameter Ø90mm
- min diameter Ø47mm





Use standard round filters:
- max diameter Ø110mm
-min diameter Ø100mm



Use with adapter:

- Ø47mm filters
- carbon cartridges

-



Adpter for Ø47mm geometry consist of similar base plate as normal filter plate.

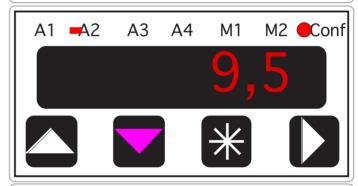
It has a adapter part where you can fit Ø47mm activated carbon cartiridges; this adapter is based on HI-Q company elements and fits their cartridges. In the same adapter there is also a place for Ø47 particle filters.

CODING OF SIGNAL LIGHTS IN PANEL METER

A1= Pressure difference on orifice: Pascal

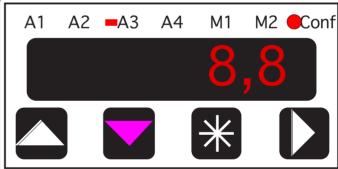
Pascal

A2 = Air flow in: m3 / h



m3/h

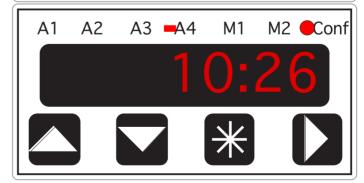
A3= Total air volume in: m3



m3

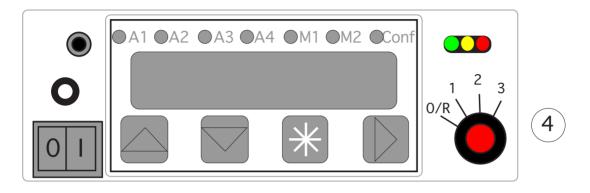
A4= Total time in: hh:mm:ss

Move on by pressing downward arrow. You can also move by upward arrow.
This can be done also during sampling.



hh:mm:ss

FLOW SPEED CONTROL



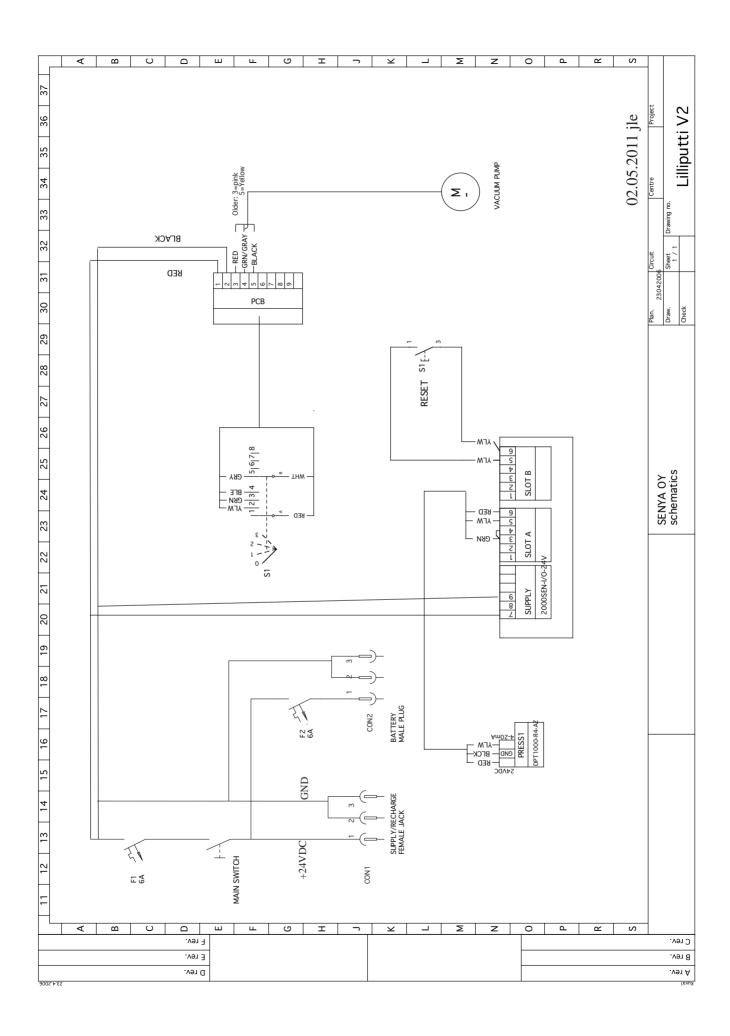
BATTERY INDICATOR

Battery fully charged

Battery half charged

Battery is empty

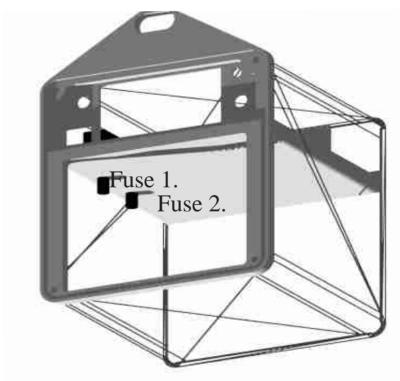
If battery goes too low during sampling, the pump will automatically stop.
To RESET this you have to turn FLOW CONTROL to 0/R.



ATTENTION! IF BATTERY PACK IS SWOLLEN, CHANGE IT IMMEDIATELY.

EQUIPMENT SELF PROTECTION



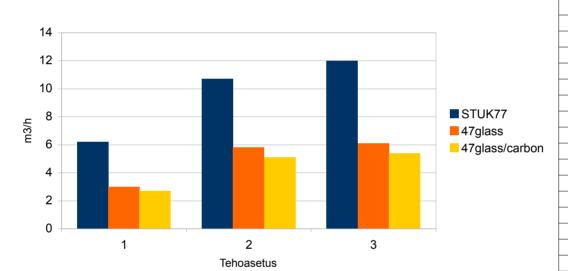


- AUTOMATIC FUSE, cuts OFF charging in over current situation:
 check what caused over current; possible cause -broken battery
 AUTOMATIC FUSE, cuts OFF if too much current is drawn from battery 1.
- 2. - check wha caused over current; possible cause short circuit in electronics
- Automatic cut OFF if pump warms too much, let pump cool intake may be fully blocked, example too filled filter.

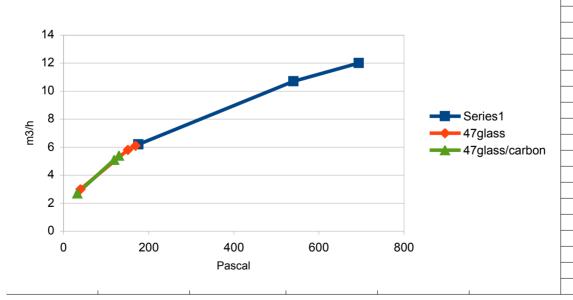
 If battery voltage drops under 20,3V pump is cut OFF; load battery. 3.
- 4.

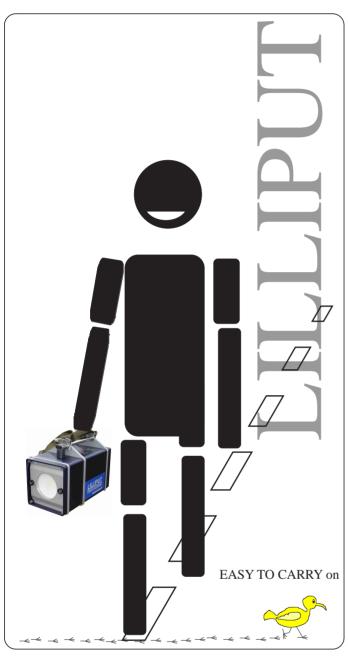
	LILLIPUT TESTING					
	Date:05.04.2011		Serial nr:STUK2011-001		Person: M. Terho	
STUK77		47glass fiber		47glass/carboi	n	
Pascal	m3/h	Pascal	m3/h	Pascal	m3/h	
176	6.2	40	3	32	2.7	
540	10.7	151	5.8	119	5.1	
694	12	169	6.1	130	5.4	
	STUK77	47glass fiber	47glass/carbor	า		
	m3/h	m3/h	m3/h			
	6.2	3	2.7			
	10.7	5.8	5.1			
	12	6.1	5.4			

LILLIPUT STUK2011-001



LILLIPUT STUK2011-001





Purpose: Where:

Collecting particles on filter Nuclear power plants, under ground mines, in emergency situations etc. where fast responce and independent operations

Portable battery operated sampler from SENYA





- outdoors, but not in heavy rain
 on heavy duty tripod
 or use shoulder carrying belt

- or on some level surface





Operation interface is simple and easy to use:



Use LILLIPUT laminated filters:

- max diameter Ø90mm min diameter Ø47mm



Use standard round filters:

- max diameter Ø110mm
- -min diameter Ø100mm



- Use with adapter:
 Ø47mm filters
 carbon cartridges

